WORKING DRAFT


# Exploring the Potential of Tax Credits for Funding Population Health

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## Summary

Over the past several years, hundreds of regional multisector partnerships have been forming across the country to improve population health. These partnerships recognize that the health and well-being of the populations in their regions are produced by a variety of conditions and determinants—including safe environments, housing, education, and economic conditions—and that clinical health care is but one of these. Absent a shift in focus to population health, chronic conditions and health care costs will continue to rise, productivity will suffer, and deep health inequities will remain. Yet, despite the critical nature of this mission, most partnerships are funded on a shoestring budget, and overwhelmingly by grants (ReThink Health 2017).

There are a number of more substantial and sustainable funding sources to which we might turn, but none are especially easy to develop. This paper explores one possibility: tax credits. Tax credits are one type of tax break that work by reducing the cost of a good or service, thereby stimulating the markets for those goods/services, leveraging private capital in the process. We sought to identify the conditions under which a tax credit policy would provide: 1) a sound and sustainable financing source for population health, and 2) a sound investment for taxpayers. Some of the key findings in this paper are summarized here.

*Tax breaks are widely used at both the state and federal levels,* spanning numerous sectors including health. At the federal level, tax breaks were claimed on 169 million tax returns, estimated to total $1.5 trillion in 2017. But, outside some notable and important tax credits that impact the social determinants of health, such as the Earned Income Tax Credit and the Low Income Housing Tax Credit, this ubiquitous instrument is not being used for population health.

*The design of a tax credit program matters greatly to its success,* and we can pinpoint what those design features are. It's important to acknowledge that not all tax credit programs are effective at producing the desired outcomes. Indeed, certain types of tax breaks, especially the $45 billion in business incentives offered by state and local governments each year, have been shown **not** to be effective at creating jobs and economic growth.

*A tax credit program for population health could be constructed to ensure positive returns on investment for taxpayers.* There is a sizeable and growing set of evidence-based population health interventions with enough financial return on investment (ROI) to be stimulated by tax credits. Limiting the tax credit to evidenced-based interventions with positive ROI ensures that the tax credit serves as a sound investment for taxpayers *and* accomplishes its health objectives.

*One constraint on the use of tax credits for population health: most service providers are based in the nonprofit or public sectors*. A tax credit will not be valuable to them because they have zero or limited tax liability. Our analysis focused on how tax credits might help fund a *portfolio* of population health investments (which can be tailored to local needs) and identified two possibilities.

- One possibility is providing tax credits to health plans and/or self-insured employers, both of whom have huge financial interests in containing health care costs. While the population covered by such a tax credit is limited to those with private insurance, it is quite significant. For-profit health plans fully insure 62 million Americans (with total enrollment of 122 million Americans), and an estimated 100 million Americans are covered by self-funded employer plans. We should also expect that these private companies would be primarily interested in interventions with relatively short payback periods. Nonetheless there are many important investments that could be made.

  For example, an evidence-based opioid program analyzed by the Washington State Institute for Public Policy was shown to have a total cost of $356 per person and was shown to create financial benefits of almost $2,700 and social benefits of $5,300, both accruing over two years. But these returns are split

between a number of beneficiaries, including taxpayers who save $370 in health care costs and health plans that save $383 in health care costs. (Participants in the program save $79 in health care costs and earn an additional $1,279.) As it stands, neither the taxpayers nor the health plans have much of an incentive to invest because their returns are about the same as their costs, and it takes two years to break even. Now imagine the cost of the program is split between a health plan and taxpayers with the use of a 50% tax credit. The net cost to each would become $178 and both would more than double their money in two years.

- A second possibility is using tax credits to spur charitable giving, such as to wellness funds. A number of states offer tax credits for donations to specific organizations and/or purposes. The largest of the state programs raised $20 million in Arizona (for specified antipoverty organizations), $40 million in Michigan (for homeless shelters and food banks, a program ended in 2011), and $24 million per year in Iowa for community foundations. Colorado's tax credit for donations to child care providers has raised an average of $12.6 million in each of the past eight years.

  Research suggests that the demand for charitable giving can be spurred through tax credits, although giving seems to respond to a variety of factors: the health of the economy, the sector being donated to, the income of the giver, whether it is structured as a match, and other features of the state tax code. If a tax credit were offered for population health donations, we would want to ensure through the design of the program that the amount of giving will actually *increase*. A poor outcome would be paying for a donation that already occurs and/or shifting the donation from one sector to another without increasing the overall level of giving.

*Compared to the federal government, states have a unique set of incentives and opportunities to enact a tax credit for population health.* First, containing Medicaid costs is increasingly important for states. All states except Vermont have some type of a balanced budget requirement, and Medicaid is the second largest expenditure item behind K-12 education. Second, states are becoming increasingly aware that their $45 billion investment in business incentives is failing to produce as expected. The Pew Charitable Trusts has called for improved accountability measures and evaluation, and since 2012, 21 states have enacted laws requiring regular evaluation. Because health and the economy are linked, states desiring higher ROI could choose to redeploy their tax credit dollars in population health instead. Finally, some states are showing willingness to use tax credits for singular population health investments, including the administration of an opioid program in New Hampshire and a lead abatement program in Massachusetts.

## Introduction

Over the past several years, hundreds of regional multisector partnerships have been forming across the country to improve population health. These partnerships recognize that the health and well-being of the populations in their regions are produced by a variety of conditions and determinants—including environmental conditions, housing, education, and economic conditions—and that clinical health care is but one of these. Absent a shift in focus to population health, chronic conditions, and health care costs will continue to rise, productivity will suffer, and deep health inequities will remain. Yet, despite the critical nature of this mission, most partnerships are funded efforts on a shoestring budget, and overwhelmingly by grants (ReThink Health 2017).

This paper is based on the premise that, if we want healthy people and communities, we must change our spending and investment patterns to invest in effective population health interventions. Affordability is not the issue; after all, as a nation, we spend $3 trillion a year on health care. Rather, the question is *how*? Through what financing sources can we begin to make investments with high returns for health and well-being?

There are a number of substantial and sustainable funding sources to which we might turn, but none are especially easy to develop. Nonetheless the stakes are high, and it behooves us to vigorously imagine possibilities. This paper explores one possibility to bring funding to scale for population health: tax credits.

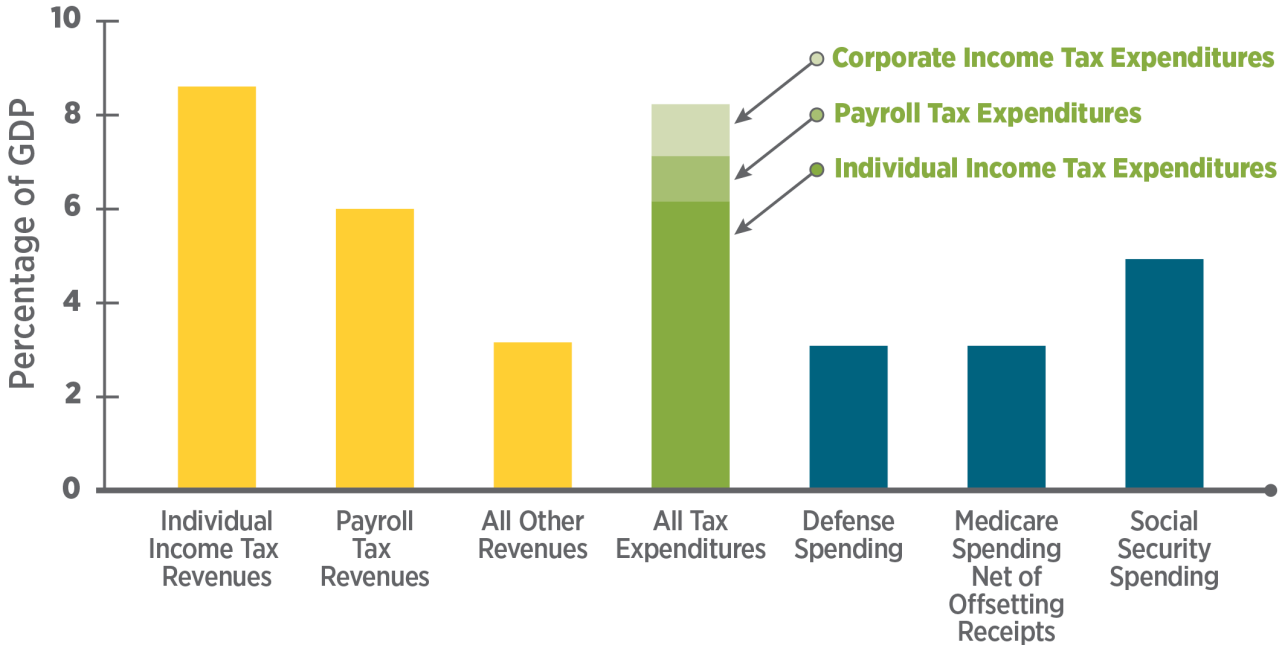
## Tax Expenditure Policy

Tax policy is two-sided, much like an old-fashioned vinyl record. Side A concerns the imposition of taxes—who should pay and how much—and plays out amid hot public debate and attention. Side B concerns "tax expenditures," commonly known as tax breaks—and typically receives much less attention. It might come as a surprise that the growth of federal tax expenditures has exceeded that of federal discretionary funding over the last 40 years (Marples 2015). Tax expenditures were claimed on 169 million federal tax returns in 2016, netting out at around $1.5 trillion, roughly the same size as total discretionary spending in the federal budget. (See Exhibit 1: Revenues, Tax Expenditures, and Selected Components of Spending in 2017.)

The Federal Tax Code has allowances for around 170 tax expenditures, across sectors as diverse as national defense, agriculture, housing, energy, natural resources, international affairs, health care, transportation, community development, education, income security, and more. State tax structures often mirror the federal structure, allowing the same deductions, exclusions, and credits. In addition, states operate their own tax programs, especially business incentives such as enterprise zones and film production credits, which totaled an estimated $45 billion in 2015 at the state and local levels.

## Exhibit 1. Revenues, Tax Expenditures, and Selected Components of Spending in 2017

Tax expenditures, projected to total more than $1.5 trillion in 2017, cause revenues to be lower than they would be otherwise and, like spending programs, contribute to the deficit.




Congressional Budget Office January 2017

*Illustration by Joshua Shakin for Congressional Budget Office (blog), "Tax Expenditures" (March 2017)*

Despite the ubiquitous use of tax breaks, few are specifically aimed at improving population health. But, why couldn't there be a tax credit for interventions shown to improve population health? And what would it take?

This paper explores the potential use of tax credits—a particular form of tax expenditure—as an effective means to finance and promote investments in population health. We seek to identify the conditions under which a tax credit policy would provide:

- a sound and sustainable financing source for population health; and
- a sound investment for taxpayers.

This paper makes two claims. First, tax expenditures represent an investment by taxpayers. Taxpayers should be able to expect positive returns to public welfare; if not, why grant the tax break? "Everybody else gets a tax break" is not a good reason for creating a tax expenditure for population health. It must be held to the standard of producing positive public returns.

This is a (relatively) high standard. The Government Accountability Office (GAO) reported in 2016 that federal agencies named only 11 tax expenditures as contributing to their mission or goals (GAO 2016). In its review of the $45 billion in state and local business incentives, the UpJohn Institute wrote: "Incentives do not have a large correlation with a state's current or past unemployment or income levels, or with future economic growth" (Bartik 2017).

Second, the effectiveness of a tax expenditure program is largely contingent on its design. Despite less than stellar performance in many instances, tax expenditures are not an inherently inferior instrument. Many tax expenditure programs suffer from weak design, namely: inattention to the structure and strength of underlying markets, vague goals, imprecise criteria for claiming the tax break, and lack of accountability mechanisms.

This paper first provides a brief review of how tax expenditures work, then suggests why population health is a good candidate for a tax credit—a specific form of tax expenditure. The bulk of the paper explores the strengths and weakness of various tax credit design elements, and concludes by suggesting key design features for a successful population health tax credit.

## How Do Tax Expenditures Work?

The simplest way to think of tax expenditures is as a set of gigantic rebate programs. Some of the rebate programs are straightforward and simple, while others require a great deal of paperwork, accounting, and legal counsel. Some programs offer rebates to corporations, some to individuals, and some to both. The "expenditure" of tax breaks comes in the form of reduced revenue to the treasury.

Tax expenditures are of numerous types. Three common types of tax expenditures are: tax deductions (where certain expenses, such as charitable giving reduce taxable income); exclusions (where sources of income, such as social security income, are not counted in taxable income); and tax credits (a dollar-for-dollar reduction in tax liability, such as the child care tax credit). Of the three, tax credits provide the most powerful and predictable financial incentive because they reduce one's tax liability on a dollar-for dollar basis (a $100 credit reduces taxes by $100).[1]

Unlike government appropriations that pay directly for goods and services, tax expenditures incentivize the supply or demand for goods and services in the private market, leveraging private capital. Through the "rebate," tax expenditures reduce the cost of producing or consuming a good or service, thereby encouraging more supply or demand.

## Is Population Health a Good Candidate for Tax Credits?

What would a population health tax credit fund? Population health is not a good or service itself, but an outcome from an array of interventions. One might think of investments in population health as a *portfolio* of services designed to improve the health and well-being of the community at large, much like employer wellness programs pay for a basket of services to improve employee health.[2] Population health is a good candidate for tax credits for two reasons. First, as a "merit good," society at large stands to gain from additional investment in population health. Second, there are numerous interventions that offer taxpayers and private investors enough financial and/or social returns such that certain markets could be activated to produce improved population health.

Population health interventions, as a set of desirable goods and services, currently reside in a state of market failure: the private market is "incomplete" in producing too few of these goods and services. An incomplete market is one where some of the necessary conditions for market formation exist, but not all of them. In the case of incomplete markets, total supply is insufficient to meet the needs of consumers.

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[1] Compare this for example to a $100 deduction. It reduces taxable income by $100, so if a taxpayer is paying a 15% marginal tax rate, the deduction is worth $15).

[2] The Healthy Workforce Act of 2009 proposed a tax credit for businesses offering comprehensive employee wellness programs, including programs that raise health awareness among employees, encourage employee behavioral changes, and prompt employee participation through an incentive. The proposed credit was $200 per employee for the first 200 employees and up to $100 per employee, thereafter. http://www.uswwa.org/legislation

More specifically, population health interventions have the attributes of a "merit good," specifically: 1) the benefits/returns accrue over time, so they are undervalued when making consumption decisions; 2) benefits/returns are captured by numerous entities other than the buyer; and 3) low-income individuals are not able to afford the full market price, which means they will under consume. In short, merit goods are under valued by the consumer, leading to too little supply.

It is not the purpose of this paper to make the case that population health spending falls short of socially optimal levels. A wide body of evidence attests to this fact.[3] While it may not be possible to specify exactly where the optimal level lies, various studies have shown positive return on investment (ROI) from as little as $10 per capita to $400 per capita. For a frame of reference, in the U.S. health care system, per capita spending on personal health care is $7,500, with administrative costs alone estimated at $650 per capita. Employer wellness programs average about $700 a year per employee (The Commonwealth Fund n.d.).

At the intervention level, numerous population health investments have been demonstrated to have positive ROI for taxpayers and society at large. For example, the Washington State Institute for Public Policy (WSIPP) has conducted meta-analyses of hundreds of social/health interventions to estimate expected yields from any given intervention, and thus to identify the best candidates for investment. This robust, evidence-based database indicates for each intervention the costs, the benefits, the recipients of benefits (i.e., taxpayers, individuals, or others), the sector to which the benefits accrue (e.g., education, health, employment), and the time frame over which the benefits materialize (WSIPP 2017). Interventions with proven effectiveness can be found in numerous sectors, including, but not limited to, certain mental health treatments for adults and children, maternal health, substance abuse prevention and treatment, lead abatement, child welfare, K-12 education, healthy eating and weight loss programs, and criminal justice programs.

For these high ROI interventions, it is the "split" of the returns across sectors, beneficiaries, and time that makes population health a suitable candidate for tax credit funding. For example, an evidence-based opioid program analyzed by the WSIPP has demonstrated a total cost of $356 per person, creating financial benefits of almost $2,700 and social benefits of $5,300, accruing over over two years. But these returns are split between a number of beneficiaries and sectors, including taxpayers who save $370 in health care costs and health plans that save $383 in health care costs.[4] As it stands, neither the taxpayers nor the health plans have much of an incentive to invest because their returns are about the same as the costs of the program, and it takes two years to break even. Now imagine the cost of the program is split between health plans and taxpayers with the use of a 50% tax credit (half of the cost is rebated). The net cost to each would be $178; both would more than double their money in two years.

With such strong returns to be had, one might wonder why governments are not investing more heavily in population health, whether through direct appropriations or tax expenditures. All states except Vermont have some type of balanced budget requirement. Tax credits reduce the revenue available to governments, thereby making it more difficult to balance budgets in the short term. There are, however, two situations in which states might use tax credits to invest in population health. The first would establish a new tax credit, with a corresponding reduction in revenues to the treasury. The second would repurpose an existing tax credit away from its current use and apply it to population health. The first case is like adding money to your stock market holdings; the second is rebalancing your portfolio—thinning some stocks and adding others. In the first case, you seek positive returns above some threshold; in the second case, you seek higher returns than your current portfolio is yielding. The second situation offers states the opportunity to improve their financial situations over time with no added costs to their treasuries.

[3] See for example: cites for WSIPP; RTH Health Affairs paper; CDC: https://www.cdc.gov/media/dpk/healthy-living/community-guide/community-guide.html;http://eprints.whiterose.ac.uk/116811/1/jech_2016_208141.full.pdf

[4] Participants in the program save $79 in health care costs and earn an additional $1,279.

## Methodology

Tax credit policies are so numerous, and of so many different types, designs, and intended objectives that the application of tax credits to population health is not immediately clear. In order to make the analysis manageable, this paper characterizes tax expenditures and credits into four classes according to the manner by which they operate to increase the supply and demand for goods and services.

1. *Demand credits*, such as solar energy tax credits, operate similarly to consumer rebates by reducing the price of a good or service to consumers.
2. *Supply (or production) credits* subsidize the cost of producing a good or service, such as cellulosic ethanol tax credits.
3. *Investable tax credits* are a form of production credit in which claimants deduct a percentage of investment costs from their tax liability. Investable tax credits often create a marketable financial asset in the process because these tax credits are transferrable. The most prominent example is the Low Income Housing Tax Credit (LIHTC).
4. *Charitable tax credits* are a lesser-known form of credit offered by some states to increase the supply of charitable giving. It is similar to the well-known deduction for charitable giving, although in a more financially powerful tax credit form because it offers the donor the opportunity to lower their cost of giving by a greater amount than the deduction. Examples include community foundation tax credits (Iowa) and the Arizona anti-poverty tax credit.

A fifth type of credit has the primary purpose of providing income support, as in the Earned Income Tax Credit, which in dollar terms is the largest single tax credit (Desilver 2016). This class is not considered here because it cannot be used as a financing source for population health interventions, although one could clearly make the case that income support helps improve population health.

To better understand the drivers of a successful tax credit, we examined the literature for each of the four classes of tax credits named above. In addition to focusing on evaluative research, we reviewed specific tax credit programs to gain insights. We also sought out emerging examples of credits used to support population health. Exhibit 2, below, outlines this review; the detailed reviews can be found at (forthcoming).

### Exhibit 2. A Typology of Tax Credits

| | Current Examples | Emerging Pop Health Examples |
|---|---|---|
| **Demand** | • Solar Investment Tax Credit (federal; individual and corporate)<br>• Health Premium Tax Credit (federal; individual) | • Canada's healthy behavior tax credit (federal; individual) |
| **Production** | • Enterprise Zones (state; corporate)<br>• Cellulosic ethanol (federal; corporate) | • Health Enterprise Zones (state; individual and corporate)<br>• New York farm credit (state; corporate) |
| **Investor** | • Low Income Housing Tax Credit (federal; corporate)<br>• New Markets Tax Credit (federal; corporate) | • Mid-State Health used a $3.4 million New Markets Tax Credit to find funding to build a community health center in rural Plymouth, NH (federal; corporate) |
| **Charitable Giving** | • State credits such as the Arizona credit for donations to anti-poverty agencies (individual and corporate) | • New Hampshire credit for opioid program coordination (state; corporate) |

## Critical Features to Consider in Designing a Population Health Tax Credit

Numerous design elements factor into creating a successful tax credit for population health. This paper is hardly exhaustive, but it identifies some of the more salient considerations and programmatic design features to consider:

- Source of Funds: is there a taxpayer?
- Market Conditions: is there an underlying market for population health?
- Price Sensitivity: how big should the tax credit be?
- Distributional Impacts: who claims the tax credit and who benefits from the proceeds?
- Simplicity: what is required to administer the tax credit?
- Accountability: how do we know the tax credit is achieving its aims?

### Source of Funds: Is There a Taxpayer?

While it seems glaringly obvious, tax credits only have value for those who pay taxes. Many population health interventions are rooted in the public and/or nonprofit sectors, such as promoting healthy behaviors, reducing poverty, addressing childhood trauma and welfare, curbing substance abuse, promoting educational achievement, providing good housing, and so on. Neither public sector nor nonprofit providers pay income or property taxes. Thus, the first task is to identify taxpayers with a stake in population health outcomes.

### Market Conditions: Is There an Underlying Market for Population Health?

A tax credit is a subsidy designed to shift markets and leverage private sector capital. Is there a market that can be stimulated for population health? Tax credits will be ineffective when market conditions are weak or not aligned with the purpose of the credit. For example, the cellulosic ethanol (biofuels from plant fibers) credit failed to produce energy at the targeted levels in part because manufacturing capacity was too immature to take advantage of the incentive (Gecan 2010, *Reuters* 2011). Job creation in enterprise zones have often failed to materialize as intended because the jobs being created did not match the skill sets of residents in the zone (Greenbaum and Landers 2009, Peters and Fisher 2002, Department of Legislative Services 2013).

On the other hand, by spurring demand, the Solar Tax Credit successfully grew the market for solar energy. The emerging solar industry required volume sales to reduce production costs so that solar could be offered at a price attractive to consumers. The tax credit provided temporary price reductions (of 30%) to achieve that volume. The number of solar installations has increased by 1600% since 2006, the cost of installation has decreased more than 70%, and the solar job market has boomed (ITC 2017). Solar employs over 260,000 people and employment has grown by 123% since 2010 (The Solar Foundation 2016). Grid parity, or better, is expected for solar by 2020 (meaning solar will be cheaper than fossil fuels), suggesting that the market can remain successful beyond the tax credit, which will sunset by 2021 for residential solar and continue at 10% beyond 2022 for corporations (Nelder and Silberg 2015).

Likewise, the Low Income Housing Tax Credit (LIHTC) has been widely lauded for creating a market for affordable housing. Since its inception in 1986, the LIHTC has provided over 3 million affordable housing units, becoming “the single most important form of federal assistance to preserve and expand the supply of affordable rental housing for low-income households” and has done so with bi-partisan support (Zigas 2013). In addition to providing affordable housing, the program has created jobs. According to the National Association of Home Builders, in a typical year, LIHTC development supports approximately 95,700 jobs; $3.5 billion in federal, state, and local taxes; and $9.1 billion in wages and business income (Berger n.d.).

Merit goods suffer from too little demand and supply. Yet it is possible to imagine a set of markets that could be stimulated through a tax credit to improve population health.

**Stimulating Private Sector Investment in Population Health**
Health care insurers and self-insured employers have huge financial interests in population health because effective population health investments reduce health care costs and improve productivity. For-profit health plans fully insure 62 million Americans (with total enrollment of 122 million Americans). An estimated 100 million Americans are covered by self-funded employer plans (Hill n.d.). At an average of $7,500 in personal health care spending per capita, this "market" covers 162 million Americans and totals $1.2 trillion. A modest tax credit of ½ of one percent ($50 per covered life), for example, would yield roughly $80 billion annually[5] for population health investments. Compare this to employee wellness programs, which are offered by nearly 80% of employers, at an average cost of nearly $700 per employee annually, even though the ROI of many such programs is questionable (Healthcare Finance 2015).

Even though population health investments could reduce health care costs and improve productivity, current investments by these stakeholders is limited (notwithstanding sizeable investments in employee wellness programs). One important factor limiting demand is the time horizon. Corporations of all types are under intense pressure to produce financial results in the short run. Financial returns from population health investments can take anywhere from a year (e.g., prenatal care for Medicaid mothers) to a few years (e.g., improving adherence to medication for those suffering from hypertension or diabetes) to decades (e.g., preventing tobacco use among adolescents and teenagers). Moreover, private health plans experience considerable "churn" in that patients enrolled today may not be enrolled tomorrow. In the commercial market, patient turnover has been estimated at about 15% per year (Partners n.d., J.D. Power 2015). Churn is exceptionally high in the Medicaid market—as high as 50% per year. The instability in their patient base leaves some insurers reluctant to invest in population health measures because if patients leave, they fear they will not capture their expected ROI.

A second factor limiting demand is the widespread distribution of benefits, often called "the wrong pocket" problem. Many population health interventions create positive returns, but these returns are often spread across numerous sectors and beneficiaries. In the case of lead paint hazard control, for example, benefits far outstrip costs, accruing in the form of health care savings, reduced crime, lower special education costs, higher lifetime earnings, and higher tax revenue (Gould 2009). Costs are typically born by a single payer, however, and the subset of benefits that accrue to *that* payer may not fully compensate those costs.

Nonetheless, to the extent that population health interventions create financial gains in the form of lower health care costs and/or productivity improvements—and a great many do—the time horizon, churn, and wrong pocket problems could be mitigated with a properly designed tax credit. This is because tax credits increase the ROI to the investor, as illustrated above with the opioid treatment program. Moreover, corporations can and do make investments with longer-term payback periods, if they can be convinced that the numbers make sense. For example, the LIHTC is not received in a lump sum by investors, but over a period of ten years.

**Stimulating Investment Funding in Population Health**
Individuals and businesses wishing to contribute to their community provide a potential supply of investment funding for population health. Charitable giving totaled $358 billion in 2014, which included $258 billion of donations by individuals and $18 billion by corporations (Radde 2015). Since 1968, growth of charitable giving in the United States has been roughly twice that of the S&P 500 (List 2011).

A number of states offer tax credits for specific organizations and/or purposes (see Appendix A: Exhibit 3) . The largest of the state programs provided credits for donations totaling $20 million in Arizona (for specified antipoverty organizations), $40 million in Michigan (for homeless shelters and food banks, a program ended in 2011), and $24 million per year in Iowa for community foundations (Teles 2016). Colorado's tax credit for

[5] Depending on the size of the tax credit, much greater investment might occur. See the pricing discussion.

donations to child care providers has raised on average $12.6 million in each of the past eight years (EPIC n.d.).

Research suggests that charitable giving can be spurred through tax credits, although giving seems to respond to a variety of factors: the health of the economy, the sector being donated to, the income of the giver, whether it is structured as a match, and other features of the state tax code (List 2011). Thus giving can vary sizeably from year-to-year. For example, Exhibit 4 in Appendix A, illustrates donations to community foundations in Michigan, Iowa, and the United States. The chart suggests that a primary source of variability is the economy, small dips in giving occurred during the 2002-2003 recession, whereas large declines occurred during the Great Recession of 2008-2009. Research suggests that giving is more sensitive to upturns in the economy than to downturns (List 2011).

**Other Types of Credits Offer Limited Opportunities**
The effectiveness of a tax credit to service providers is more difficult to imagine in the population health context. Absent some level of latent demand for population health, production won't materialize because the provider lacks a willing buyer. An example of this is the paucity of opioid treatments. Thus, we must look at the production potential of corollary markets.

Health Enterprise Zones, for example, offer tax credits to health care providers, both corporate and individuals, who locate in underserved markets. As designed, they are expanding "the production of health care" to include community health workers and, in Philadelphia for example, to address the social determinants of health as well (DHMH and CHRC 2017, GSI Health n.d.). Another possible market is the food market. The Farm to Food Bank Tax credit allows New York farmers a 25% refundable credit up to $5,000 annually for donations to emergency food programs (Brown 2017). One might also imagine subsidizing grocery stores in food deserts, or look to the labor market and imagine tax credits as an alternative to spurring living wages through regulation. What's important to note is that suppliers produce singular goods and services, not baskets of goods and services, and thus to achieve widespread investment in population health through production credits, numerous programs would be necessary.

Investor tax credits offer a particular challenge for population health. They are structured to offer two types of yield—one from the tax credit and one from the underlying investment, such as affordable housing, historic buildings, and renewable energy. This means that the investment either creates a physical asset with value and/or it generates a reliable revenue stream, such as rents or the purchase of energy. Most population health interventions are services, not goods and, thus, they do not create physical assets. And if population health interventions could generate profitable income streams through sales to customers, the market would not be incomplete.

## Price Sensitivity: How Big Should the Subsidy Be?

Tax credits are subsidies. The Solar Tax Credit, for example, seems to have successfully matured the market for solar energy with a 30% tax credit—that is, consumers received a rebate equal to 30% of the cost of the solar installations. While price sensitivity is a function of the underlying markets, the question of "do we need a big subsidy to shift supply and demand or will a small subsidy suffice?" bears special attention for three reasons.

First, we don't want to waste money by investing more than necessary—or worse, paying for activity that would have occurred anyway. This is the taxpayers' money after all. Second, we don't want to invest too little and fail in our objectives. Third, there are "opportunity costs." Unless tax credit funds are unlimited, which they are not, we want to target our funds where they are most productive. It would be imprudent to target interventions where the market is stubborn—that is, where large subsidies are needed to move markets—when there are alternatives that would require smaller subsidies given the same returns.

The charitable tax credit provides a good case in point. If a tax credit were offered for population health donations, we would want to ensure that the amount of giving will increase. A poor outcome would be paying for donations that already occur and/or shifting the donation from one sector to another without increasing the overall level of giving. [For what it's worth, the very act of charitable giving seems to improve health—a 10% increase in charitable giving improves a health index by 1% (Blackman 2015).]

Survey research suggests that people give for reasons other than the tax break and the importance of the financial benefit is a secondary matter. But the tax subsidy does matter: while the results have been mixed, the sum of the literature suggests that charitable giving is sensitive to price, especially among higher income individuals (Radde 2015). Other research has found that charitable donations are influenced significantly by tax incentives (Bakija and Heim 2011).

(See Appendix A: Exhibit 3, which summarizes charitable tax credit programs in a number of states.) The size of the credit (the "price") varies from 15% in Nebraska to 100% in Arizona, meaning that Nebraskans could claim $15 of credit for every $100 of giving, and Arizonans could claim the full amount (subject to very limited caps of $400 per individual). One evaluation study estimated that the Arizona tax credit did little to increase overall giving, while Iowa's charitable giving credit of 25%, with a more generous cap of $300,000, increased donations by 125%. Even though the size of Iowa's tax credit is much smaller than Arizona's, it appears that other program design features such as caps may matter more than the size of the credit (Teles 2016).

The Health Premium Tax Credit (HPTC) provides another good example of how price sensitivity can impact effectiveness. Launched in 2014 as part of the *Affordable Care Act*, the HPTC assists individuals and families at 138%-400%[6] of the federal poverty level (individual income between $16,400 and $47,550) in paying for health insurance. The tax credit increased insurance coverage among the lowest income individuals (who received an 80% subsidy), but spurred no significant changes in insurance for those at higher income levels who would only receive a 10% subsidy (Hinde 2016).

It's important to note that tax credits are sometimes enhanced with additional financial benefits and/or regulatory requirements. Households at the lower income range for the HPTC have also been eligible for cost-sharing for out-of-pocket costs such as with co-pays, prescriptions, etc. The LIHTC and the New Markets Tax Credit allows investors to meet requirements imposed by the Community Reinvestment Act.

## Distributional Impacts: Who Claims the Tax Credit and Who Benefits from the Proceeds?

Federal tax expenditure data shows that, with a few notable exceptions, individual claimants tend to skew heavily toward those in upper incomes. Of the 10 largest individual tax expenditures in dollars, 50% were claimed by households in the top 20% of income and 17% were claimed by households in the top 1% income bracket.

There are straightforward reasons for this. First, the "rebate" requires itemization on one's tax return. Most lower income households do not itemize; they take the standard deduction. Second, consumers must have the money up front to pay for the service or good in question, which may not be possible for many lower income households. Third, the tax break has no value if there is no tax liability, which is often the case for low-income households.[7]

There are notable exceptions, however, which are accomplished through a design feature known as a "refundable" credit. Refundability means that the claimant receives the full value of the tax credit even if the

[6] (100%-400% in non-Medicaid expansion states)
[7] Also, for tax deductions and exclusions (unlike credits) the tax break is worth more for higher income households because they tend to be in higher marginal tax brackets.

claimant's tax liability is less than the value of the credit. Two very large tax credits are refundable: the Health Premium Tax Credit and the Earned Income Tax Credit. For this reason, if one looks at just tax credits rather than the full range of tax expenditures, a very different distribution emerges—one skewed toward the lower range of incomes.

Charitable tax deductions are claimed across the income spectrum. Giving rises with household income, both as a percentage of households that donate as well as the average donation. However, charitable giving falls as a percentage of household income as income levels rise (Blackman 2015). In the case of investor tax credits such as the LIHTC, claimants tend to be sophisticated investors given the complexity of the credit and its function as an asset in financial markets. The majority of LIHTC credits are claimed by corporations in two sectors: finance and insurance and "management of companies (holding companies)" (Desai, Dharmapala, Singhal 2008).

Presumably, no corporation or individual would claim a tax credit unless they found the activity generating the credit it to be beneficial. Untangling who benefits from the proceeds of a tax credit (i.e., the use to which the tax credit funds are put) can be quite complicated, however, and here we must be alert for unintended consequences. The LIHTC provides numerous examples. Housing projects must generate positive cash flow in order to entice investors, which often means the housing projects cannot serve the lowest income individuals without significant forms of other subsidies. This has the effect of limiting the LIHTC's capacity to serve the lowest income households. LIHTC family housing units are predominantly located in low-school-quality areas (Deng 2007), arguably contributing to the perpetuation of cycles of poverty and segregation of neighborhoods. Finally, the transferability of the LIHTC has created a secondary market that benefits the syndicators who may consume 10-27% of the total equity investment (GAO 1997; Desai, Dharmapala, Singhal 2008).

Questions have also been raised about the distributive impacts of enterprise zones. In its March 2015 Economic Letter addressing enterprise zone programs, the Federal Reserve Bank of San Francisco wrote, "Our overall view of the evidence is that state enterprise zone programs have generally not been effective at creating jobs…even if there is job creation, it is hard to make the case that [tax advantaged] enterprise zones have furthered distributional goals of reducing poverty in the zones…it is likely that they have generated benefits for the real estate owners who are not the intended beneficiaries" (Neumark and Simpson 2015).

One of the distributional impacts to be alert to with population health is that the beneficiaries might be determined by who chooses to invest. Higher income communities and more profitable businesses will have more funds to invest than lower income communities and smaller or less profitable businesses. This tendency could be ameliorated with a refundable credit and/or a process that allocates tax credits, with the explicit intent of ensuring that lower income communities are not disadvantaged in the allocation.

## Simplicity: What Is Required to Administer the Tax Credit?

The simplicity of administration varies greatly depending on the type of credit and the specific design of the credit. At one end of the spectrum, the simplest tax credits are non-refundable demand credits, such as the Solar Tax Credit. The taxpayer claims the credit on his/her tax return. Refundable demand credits such as the Health Premium Tax Credit or the Earned Income Tax Credit are more complicated because eligibility for the credit must be ascertained.

In some cases, the dollar amount of tax credits is predetermined and then distributed in an allocation process, complicating tax credit administration. The use of tax credits in New Hampshire, for example, involves administration by the Community Development Financing Authority (CDFA), intermediary applicants for tax credit allocations, businesses purchasing from intermediaries, and finally the cash flow back up to the state that ultimately funds the requested program (NHCDFA 2017).

Each state has its own processes for business tax credits, but evaluations suggest that certification processes in some states are cumbersome, increase administrative costs, and may discourage participation. For example, in New Jersey the evaluation of the Urban Enterprise Zone stated, "administrative inefficiencies result from complex and bureaucratic processing" and the "cumbersome certification processes increased administrative costs and discourage business participation" (Delta Development Group, Inc. and HR&A Advisors, Inc. 2011).

In terms of simplicity, investor tax credits sit at the opposite end of the spectrum from demand credits. They are very complex to administer and typically require experts to assist in navigating the system. All of these moving parts come at a cost. For example, there is considerable "leakage" or inefficient diversion of funds caused by multiple and complex layers of housing agencies, sponsors, syndicators, lawyers, accountants, and others needed to allocate, create, track, and document the LIHTC (Zigas 2013). Industry representatives told NPR and *Frontline* that syndicators earned more than $300 million in fees in 2016 (Sherwin 2017).

## Accountability: How Do We Know the Tax Credit is Achieving Its Aims?

Accountability may well be one of the biggest criticisms of tax credit programs, but accountability can be, and has been, built into the design of some programs. Tax credits, or expenditures more broadly, are known to be "off budget," which means that the expenditures occur outside the scrutiny of annual budgeting processes. That is, once a tax credit is approved, the expenditures take place more or less automatically unless they are expiring. A number of agencies have been drawing attention to tax expenditures and calling for greater accountability (GAO 2012, The Pew Charitable Trusts 2017).

In evaluating a credit, we'd like to know whether the credit induced the targeted activity, and ideally, its ROI. Business tax incentives (including film credits, enterprise zones, and research and development credits, among others) have been among the most highly criticized for lack of accountability in the past. For example, in Maryland's Enterprise Zone, administrators had no effective method to track whether the jobs created were a result of the zone (Department of Legislative Services 2013). An evaluation of New Jersey's Urban Enterprise Zone program found that "accountability for use of funding is either non-existent or often is not monitored," and the program produced a "negative return on State investment" (Delta Development Group, Inc. and HR&A Advisors, Inc. 2011). In California, evaluators found no impact on job growth or business creation, on average, and that "little is required of the state or its local zones in the way of evaluation" (Kolko and Neumark 2010). Florida found that it was rewarding businesses for activity that would likely have occurred anyway (The Pew Charitable Trusts 2017). Evaluations of state research and development tax credits suggest that the credit does induce research and development activity, but the impact on states' economics remains unclear (SSTI 2013). The Pew Charitable Trusts has called for improved accountability measures and evaluation, and has reported on the progress being made in each state. Since 2012, 21 states have enacted laws requiring regular evaluation (The Pew Charitable Trusts 2017).

One mechanism for building accountability into charitable giving tax credit programs is to limit donations to agencies that are pre-qualified by the state. In Arizona, for example, the state posts the list of qualifying organizations on the Department of Revenue website. However, ascertaining whether the donations increase charitable giving is another matter. Few evaluations have been conducted on state charitable giving tax credits, although research on charitable giving is quite robust.

While compliance mechanisms for the LIHTC are complex, they are built into the administration of the LIHTC because investors lose their tax credits for noncompliance. Monitoring is conducted by investors and their agents (typically accounting firms) to ensure that their 10-year investment is not at-risk due to noncompliance. The resulting default rate of LIHTC properties is less than 0.1%.

Thus, there are numerous ways to build accountability into a tax credit program: 1) set very clear population health and ROI goals; 2) limit the credit to specified evidence-based population health interventions with

threshold ROIs; 3) certify agencies that can receive the charitable donation; the selection of which should vary with state institutional structures (examples: designated Accountable Communities for Health, Special Districts (as in California), Community Health Network Areas (Massachusetts), or Community Development Finance Agencies; 4) impose a small participation fee for state evaluation and monitoring; 5) sunset the program after 7-10 years, requiring renewal if successful.

## Additional Design Elements

The design features described above are not exhaustive. Other considerations include awareness, predictability and sustainability, local control and input, and spending caps.

**Awareness of the Tax Credit**
In order to claim a tax credit, taxpayers must be aware of the credit. This generally is not an issue for higher income taxpayers and corporations who consult with experts knowledgeable about tax policy, but can be a hindrance for low-income households. Healthcare.gov, for example, is a fairly easy-to-use website that guides people through the process of obtaining health insurance on the exchanges, but learning about the tax credit details takes a bit more sleuthing. A review of the California insurance marketplace found that almost one-third of enrollees in the California health exchange who were eligible for financial assistance ended up forfeiting assistance due to purchasing a non-compliant health plan (Fung, Liang, Donelan, et al. 2017). Marketing is another avenue of promoting awareness. Solar companies advertised intensely to consumers for solar panels and the “30% discount.” Federal and state government agencies conduct outreach for insurance enrollment and the HPTC, although the federal budget for doing so has been reduced by 90% under the current administration (Jost 2017).

**Predictability and Sustainability**
Predictability is important for both demand and production credits, as it sustains the financing necessary to underwrite long-term investment. If producers are highly uncertain about whether the tax credit will remain available over the longer term, whether it is a demand credit for their customers or a production credit, they will be less likely to invest. For example, ethanol fuel investors were reluctant to invest in commercial-scale, production plants without assurance that the tax credit would remain place for several years (*Reuters* 2011). In population health, we are interested in scaling the production of a variety of interventions over the longer term. Providers will be unlikely to build this capacity if there is question about the level of funding from year to year.

**Local Control and Input**
Population health needs vary from region to region—hence the federal requirement for Community Health Needs Assessments. To maximize the impact of tax credits, local input or even administration may be important in determining who makes the decisions about how funds from tax credits are used, and who is trusted to make the most productive use of funds.

Arizona set parameters for donations by identifying a list of qualified agencies, but the receiving agencies ultimately decided how to spend the donated funds. New Hampshire sets objectives each year for its tax credits and then takes applications from local agencies about how they would use the credits to achieve those objectives.

**Spending Caps**
Tax credits work by redirecting funds that would otherwise flow to the treasury. Their immediate impact is to reduce the money available for other programs. It seems reasonable that state and federal officials might be reluctant to approve yet another tax credit.

Approaches to addressing this concern include capping the amount a taxpayer can claim, capping the total amount of money available through the tax credit, and/or sunsetting the credit. For example, Arizona’s charitable donation credit is capped at $400 per person, and New York’s Farm to Food credit is capped at $5,000 per year (Teles 2016, Brown 2017). Total spending can also be capped, although this usually

requires some sort of allocation procedure to distribute the credits, a process that can create considerable complexity in administering the credit. Sunsetting a credit helps limit the total amount of spending over time. The Solar Tax Credit, for example, is due to sunset in 2021 for individual taxpayers. However, sunsetting occurs through legislative processes, where political pressure is often brought to bear to extend tax credits.

## Conclusions and Illustrative Prototypes

Based on the analysis presented in this paper, we believe that a tax credit could be designed to be: 1) a sound and sustainable financing source for population health, and 2) a sound investment for taxpayers. Our analysis shows:

- Tax expenditures are a common financial policy tool, totaling trillions of dollars annually in the United States.
- Some tax credits achieve their intended aims, some do not.
- It is highly feasible to construct a population health portfolio of interventions that warrant investment by taxpayers.
- There is a wide array of tax credit design options, and these designs are critical to the success of the tax credit.

The purpose of this paper was to raise the possibility of, and assess the potential for, a tax credit for population health. As this paper demonstrates, actual design of the tax credit is paramount, and this design will vary by state. We conclude this paper by initiating this process for interested readers. We offer two possible prototypes for a population health tax credit. The first is a credit for self-insured employers; the second is a credit for charitable giving to a Wellness Fund. Illustrative legislation for these two prototypes can be found (forthcoming).

### An Act Establishing a Tax Credit for Self-insured Employers.

The purpose this Act is to engage self-insured employers in investing more broadly in the health of employees and their families. The Act establishes a tax credit for self-insured employers to invest in certified population health interventions for employees and their families for the purposes of improving health, reducing health care costs, increasing productivity, and receiving a ROI. Private sector self-insured employers are eligible to receive a 50% credit, capped according to the number of employees. The Department of Health shall create and maintain a list of certified interventions, which shall be evidence-based and have a demonstrated financial ROI for state taxpayers of at least 100% within five years of implementation. Each year the state shall report to the legislature with an evaluation of the tax credit's effectiveness. Prior to the sunset scheduled for January 1, 2023, the legislature shall review all five annual reports to determine whether this tax credit is serving the residents and employers of the state, recognizing that some positive effects will not yet be seen in the first five years. The legislature shall determine the continuation of the tax credit no later than October 1, 2022.

### An Act Establishing a Tax Credit to Support Wellness Funds.

The purpose of this Act is to encourage individuals, businesses, and financial institutions to contribute to local investments in evidence-based population health interventions to improve health outcomes and reduce health inequities. The Act establishes a 60% tax credit to incentivize charitable donations to regional accountable communities for health that operate 501(c)(3) "Wellness Funds." The credit increases by 3% in value over five years of consecutive giving to mitigate volatility in giving from year-to year. Allowable uses of the donated funds are stipulated as: no less than 70% in certified interventions; up to 12% for backbone/integrator expenses, capped at $2.5 million; up to 5% for marketing the credit to potential donors, capped at $1 million; and 8% to revert to the state for reallocation to other areas of the state that may not have equitable conditions for donor activity. The state shall create and maintain a list of certified interventions, which shall be evidence-based and meet certain ROI thresholds as well as other health

objectives. Each year the state shall report to the legislature with an evaluation of the tax credit's effectiveness. The tax credit sunsets on October 1, 2022 and may be renewed upon a determination that it has met its stated objectives.

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# Appendix A

## Exhibit 3. Summary of Selected Charitable Tax Credits

| Credit | State | Effective | Ended | Issued (2012) | Qualifying Organizations | Pre-Qualifying Required? | Project Specific? | Personal/Business | Percentage | Cap | Refundable? | Carry Over? | Reference |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Education Tax Credit | AK | 1987 | — | $3.8 million | Nonprofit or public schools and colleges | No | No | Business | 50%* | $5 million | No | No | (Alaska Department of Revenue, 2014) (Alaska Department of Revenue, 2015) |
| Working Poor Tax Credit | AZ | 1998 | — | $21.8 million | Varied | Yes | No | Personal | 100% | $400/$800 | No | Forward 5 years | (Gene,2013) (Office of Economic Research and Analysis, 2014) |
| Neighborhood Assistance Tax Credit | CT | 1982 | — | $5 million | Varied | Yes | Yes | Business | 60%** | $150,000 | No | Back 2 years | (Office of Fiscal Analysis, 2012) (Conn. Gen. Stat. tit. 12 Ch. 2 28a §12-630aa-638) |
| Neighborhood Assistance Tax Credit | DE | 2000 | — | est. $200,000-$300,000 | Varied | Yes | Yes | Business | 50% | $100,000 | No | Forward 5 years | (Division of Revenue. State of Delaware, 1999) (Del. Code tit. 30 Ch. 11 d. 2001-2007) (Department of Finance, 2011) |
| Endow Iowa Tax Credit | IA | 2003 | — | $5.8 million | Community Foundations | Yes | No | Both | 25% | $300,000 | No | Forward 5 years | (Gullickson and Tilkes, 2013) |
| Community Services Tax Credit Program | KS | 1994 | — | $4.1 million | Community Service, Crime Prevention, and Health Care Nonprofits | Yes | Yes | Both | 50%*** | $250,000 per Organization | Yes | No | (Kansas Department of Commerce, 2014) |
| Endow Kentucky | KY | 2011 | — | $200,000 | Community Foundations | Yes**** | No | Both | 20% | $10,000 | No | Forward 5 years | (Governor's Office For Economic Analysis, Office of State Budget Directory, 2011) (Ky. Rev. Stat. §141.438) |
| Donations to Resource and Referral Agencies | LA | 2008 | — | $218,539 | Private Agencies with contracts through the Department of Social Services | Yes | No | Business | 100% | $5,000 | Yes | No | (Louisiana Department of Revenue, 2013) (Louisiana Department of Revenue, 2015) |
| Homeless Shelter/Food Bank Credit | MI | 1992 | 2011 | $20.0 million (2011) | Homeless Shelters and Food Banks | | | Both | 50% | $100/$200 (Individuals) $5,000 (Businesses) | | | (Tax Analysis Division, Office of Revenue and Tax Analysis, 2014) |
| Community Foundation/ Education Credit | MI | 1989 | 2011 | $3.8 million (2011) | Community and Education Foundations | | | Both | 50% | $100/$200 (Individuals) $5,000 (Businesses) | No | No | (Tax Analysis Division, Office of Revenue and Tax Analysis, 2014) |
| Youth Opportunities Program | MO | 1996 | — | $793,794 (2010) | Varied | Yes | Yes | Both | 50% | $200,000 | No | Forward 5 years | (Missouri Department of Economic Development, 2015) (Missouri Department of Economic Development, 2013) |
| Food Pantry Tax Credit | MO | 2007 | 2011 | $150,000 (2008) | Food Pantries | No | No | Both | 50% | $2,500 | No | Forward 3 years | (Oversight Division, 2011) |
| Qualified Endowment Credit | NE | 2006 | 2009 | $514,000 | Any 501(c)3 with an endowment | No | No | Both | 15%***** | $5,000 | No | No | (Nebraska Department of Revenue Research Division, 2008) (Nebraska Department of Revenue, 2010) |
| Donations to Biomedical Research Institutes | OK | 2005 | — | | Medical Research Institutes | No | No | Both | 50% | $1,000 | No | Forward 4 years | (The Tax Policy Division of The Oklahoma Tax Commission, 2012) (Okla. Admin. Code §710:50-15-113) |

** Alaska Education Credit is available for up to 50% of annual contributions up to $100,000, 100% of the next $200,000, and 50% of annual contributions beyond $300,000.*
*** Connecticut provides a 100% credit for energy conservation projects and construction or rehabilitation of low-income housing units.*
**** The Kansas Community Service Program 70% credits for contributions in rural areas.*
***** Endow Kentucky requires preliminary authorization be requested by the donor rather than the grantee organization.*
****** Nebraska's Qualified Endowment Credit provided a 15% credit for individuals, S corporations, partnerships and limited liability companies and a 10% credit for C corporations.*

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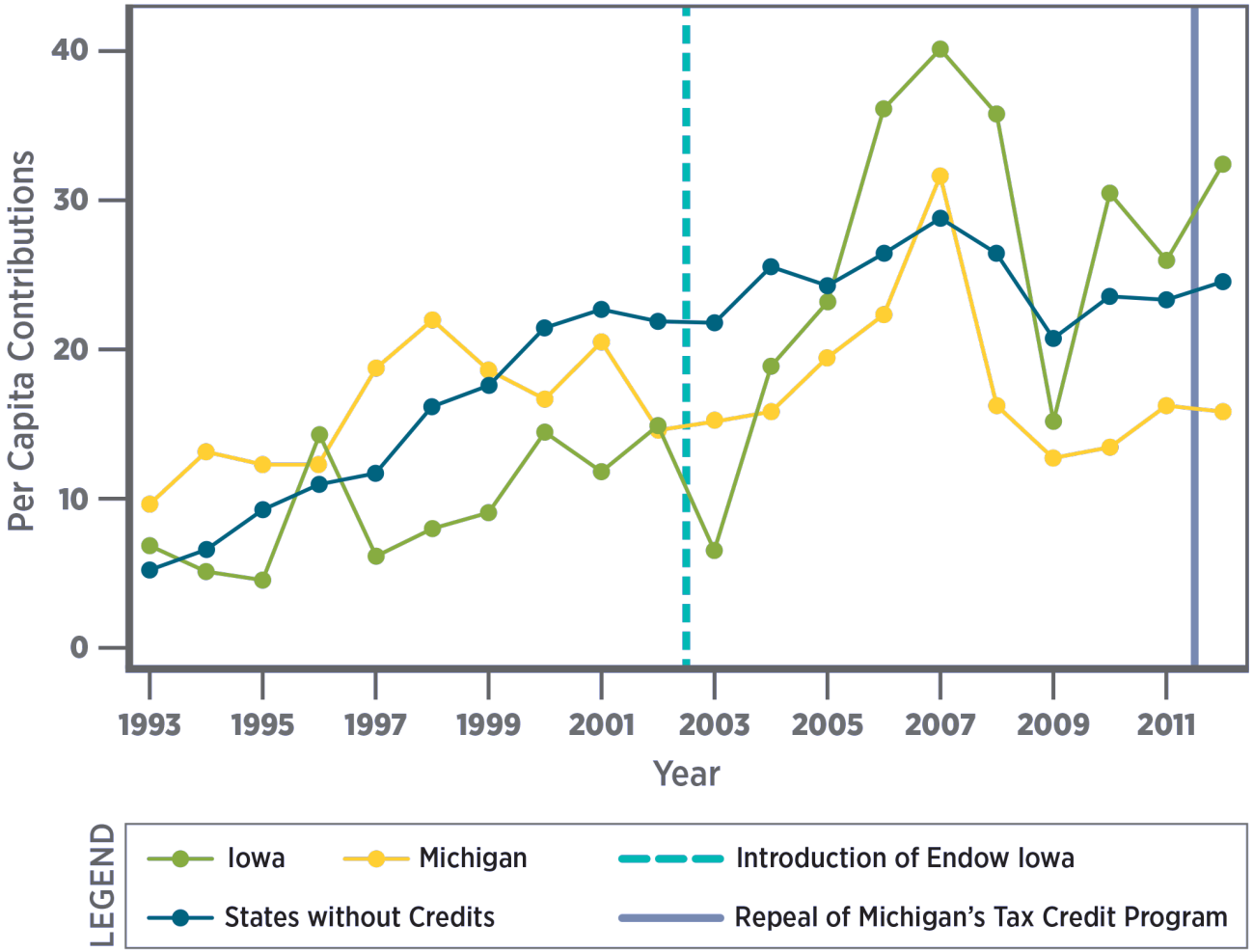
## Exhibit 4. Per Capita Contributions to Community Foundations in Michigan, Iowa and the United States, 1993—2012




*Lines in the figure represent total per capita contributions reported by community foundations on IRS Form 990. Vertical lines represent the introduction of Endow Iowa and the repeal of Michigans's tax credit programs.*

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